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10/676,794	09/30/2003	Hua-Jun Zeng	MCS-042-03	8378

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EXAMINER

FLEURANTIN, JEAN B

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/676,794	Applicant(s) ZENG ET AL.	
	Examiner JEAN B. FLEURANTIN	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-32 and 34-63 is/are pending in the application.
- 4a) Of the above claim(s) 25-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-32, 34-45 and 47-63 is/are rejected.
- 7) ☒ Claim(s) 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This is in response to the amendment filed on 12/15/2007.

Claims 1-24 and 33 have been canceled.

Claims 25-28 have been withdrawn.

Claims 29-32 and 34-63 are presented for examination.

Response to Arguments

Applicant indicates: *"the restriction requirement set forth in the Office Action, the Applicants note that it appears the Examiner meant to have Group I include claims 1-28 instead of claims 1-24. This means that **Group II would include claims 29-32 and 34-63.**"*

The arguments have been fully considered and are persuasive. Therefore, **claims 29-32 and 34-63 elect for examination.**

In response to applicant's argument, *filed 08/30/3008*, that "...provide any motivation for at least one claimed feature of an Applicant's invention, then a prima facie case of obviousness has not been established (MPEP § 2142)."

It is noted that Page discloses diversity of web pages; see page 1, section 1.1.

Further, in page 2, section 2, Page discloses a ranking for every page on the web.

Furthermore, in page 3, section 2, Page discloses link structure of the web; page 4, figure 2 - simplified pagerank calculation. Thus, Page disclose "constructing an implicit links graph from the implicit links; generating two-item sequential patterns from the ordered pairs; updating the implicit links graph using the two-item sequential patterns" (i.e., see page 6, para 2, sections 2.6);

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re-ranking search results obtained from a search engine to enhance the local searching to produce updated search results" (i.e., re-ranking search results; see page 10, Table 1, sections 5.2, 5.3 and 5.4). The arguments are not persuasive.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29-39 and 55-63 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 2106:

As per independent claim 29

The independent claim 29 is directed to a computer-readable "*medium*", in which re-ranking search results. The claimed steps are not being performed by any form of computer hardware component. Therefore, the mechanism for re-ranking, a linear combination of a position of a page in two lists, sorted by similarity as the purpose of the invention. The claimed, "*medium*" fails to fall with one of four statutory categories of invention, process, machine, manufacture and composition, and is software per se.

As per independent claim 55

The independent claim 55 is directed to search enhancement system, in which generating ordered pairs. The claimed steps are not being performed by any form computer hardware component. Therefore, the mechanism for re-ranking, a linear combination of a position of a page in two lists, sorted by similarity as the purpose of the invention. The claimed, "*system*" fails to fall with one of four statutory categories of invention, process, machine, manufacture and composition, and is software per se.

The dependent claims are rejected under the same rational.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-32 and 34-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over "The Page Rank Citation Ranking: Bringing Order to the Web - 1998" Issued to Page et al., ("Page") in view of "Mining Access Patterns Efficient from Web Logs - 2000" issued to Pei et al., ("Pei"), both submitted by the Applicant.

As per claim 29, Page discloses "A computer-readable medium having computer- executable instructions for enhancing local searching of web sites" (i.e., implemented a search engine, web pages; see page 9, para 2, sections 5 and 5.1) comprising;

"generating ordered pairs of pages from the browsing sessions" (i.e., built a web search engine, page rank; see page 2, para 2 and section 1.2 and page 14, last para, section 7.3 and Fig. 7) "to find implicit links by using a gliding window to move over explicit paths of the browsing sessions to generate the ordered pairs pages" (i.e., page rank; see Fig. 7);

"constructing an implicit links graph from the implicit links; generating two-item sequential patterns from the ordered pairs; updating the implicit links graph using the two-item sequential patterns" (i.e., see page 6, para 2, sections 2.6);

re-ranking search results obtained from a search engine to enhance the local searching to produce updated search results" (i.e., re-ranking search results; see page 10, Table 1, sections 5.2, 5.3 and 5.4); and

"displaying the updated search results to a user" (i.e., resulting page rank; see page Table 2).

Page fails to explicitly disclose intranets by mining user access logs, segmenting the user access log into different browsing sessions. However, Pei discloses access log (see Pei page 396, pp 1 - section

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introduction & page 397, pp 2 & table 1). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Page by user access log as disclosed by Pei (see Pei page 400, pp 3). Such a modification would allow the method of Page to provide efficiently mining web access from large set of pieces of web log (see Pei page 397, last pp), therefore, improving the accuracy of the implicit links search enhancement system and method for search engines using implicit links generated by mining user access patterns.

As per claim 30, Page discloses "(a) data cleaning; (b) browsing session identification; (c) consecutive repetition elimination" (see page 14, last para, session 7.3).

As per claim 31, Page further discloses "comprising identifying each individual ones of the browsing sessions" (see page 11, last para section 6).

As per claim 32, Page further discloses "identifying in terms of a user identification and a chronological order of pages" (see page 14, last para, session 7.3).

As per claim 34, Page further discloses "defining the gliding window size, wherein the size represents a maximum interval a user clicks between a source page and a target page" (see page 11, last para, session 6).

As per claim 35, in addition to claim 29, Page further discloses "filtering the ordered pairs to remove any ordered pairs that are infrequently occurring" (see page 9, para 2, section 5.1).

As per claim 36, Page further discloses "determining a frequency of each of the ordered pairs" (see page 9, para 2, section 5.1).

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As per claims 40-44 and 51-54, the limitations of claims 40-44 and 51-54 are similar to claim 29-36, therefore, the limitations of claims 40-44 and 51-54 are rejected in the analysis of claim 29-36, and this claim is rejected on that basis.

As per claim 45, Page further discloses “defining a modified re-ranking formula in terms of the adjacency matrix” see page 10, Table 1, sections 5.2, 5.3 and 5.4).

As per claim 47, Page further discloses “discarding any ordered pairs having a frequency below the minimum support threshold” (see page 9, para 2, section 5.1).

As per claim 48, Page further discloses “the random walk technique further comprises a probability parameter” (i.e., estimating web traffic; see page 13, para 1, section 7.1).

As per claim 49, Page further discloses “re-ranking further comprises using an order-based re-ranking technique” (see Table, ranking two different views).

As per claim 50, Page discloses “the order-based re-ranking technique further comprises using a linear combination of page positions contained on two lists” (see Table, ranking two different views).

As per claims 55-63, the limitations of claims 55-63 are similar to claim 29-36, therefore, the limitations of claims 55-63 are rejected in the analysis of claim 29-36, and this claim is rejected on that basis.

Allowable Subject Matter

Claims 37-39 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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CONTACT INFORMATION

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571 – 272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571 – 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/JEAN B. FLEURANTIN/

Primary Examiner, Art Unit 2162